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EXAMINER

OPSASNICK, MICHAEL N

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/751,871

Applicant(s)

MOHAMMED, YUNUS

Examiner

Michael N. Opsasnick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-31 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/16/2006 has been entered.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Examiner suggests including a reference to speech applications in the title.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11,19-22,27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (6021409) in view of Sarukkai et al (5819220).

As per claims 1,27, Burrows (6021409) teaches:

“receiving a word list.....word list” as receiving word list from paring module containing words as well as their contents (col. 6 lines 60-67)

“selecting word from the word list” as choosing the word (col. 11 lines 14-16)

“generating an index.....word” as index corresponding to the word (col. 11 lines 4-7)

“encoding the selected word.....data” as encoding the words (col. 12 lines 50-63; col. 14 lines 48-55)

“writing the encoded word.....memory” as storing the entries (col. 12 lines 50-67).

Burrows (6021409) does not explicitly teach using the word techniques in a speech related application (Burrows (6021409) teaches the use of the word techniques in an internet environment), however, Sarukkai et al (5819220) teaches using word list techniques in web based speech applications (Fig. 3, subblock 32,40,42, interacting with a speech recognition engine, subblock 36). Therefore, it would have been obvious to one of ordinary skill in the art of internet information portals to adapt the teachings of Burrows into speech related web applications because it would advantageously tailor the

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speech enabled sites to specific vocabularies (Sarukkai et al (5819220), col. 3 lines 39-45).

As per claim 2, Burrows (6021409) teaches:

“repeating the steps.....data” as feedback loop for the next word (fig. 2, subblock 59, back to subblock 130, to repeat the page and parsing module)

As per claims 3,22,30, Burrows (6021409) teaches:

“writing the codebooks....lexicon memory” as stored data structure with an index format and pointer (col. 13 lines 24-32, lines 45-51) can be considered as a codebook.

As per claim 4, Burrows (6021409) teaches:

“counting the words....word list” as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55)

As per claim 5, Burrows (6021409) teaches:

“determining....memory” as using index and pointers for the next available locations (col. 13 lines 45-50)

As per claim 6, Burrows (6021409) teaches:

“calculating.....hash table” as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

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As per claim 7, Burrows (6021409) teaches:

“writing an offset.....memory” as computing a delta value as an offset (col. 11 line 65 – col. 12 line 6).

As per claim 8, Burrows (6021409) teaches:

“providing...word encoders” as compressing the word entries based on delta values (col. 11 line 40 – col. 12 line 26; encoding)

“providing....data encoders” as word list with domains such as attributes, and encoding based on that information (col. 9 lines 21-29)

As per claim 9, Burrows (6021409) teaches Huffman coding (col. 12 lines 45-47)

As per claims 10,27, Burrows (6021409) teaches:

“writing a data structure.....dependent data” as hash encoding used (col. 14 lines 48-58) including content (col. 7 lines 58-63; col. 8 lines 19-26)

“wherein each word dependent data portion....portion” as indicating the word an location pairs (including content -- col. 7 line 65 – col. 8 line 53)

As per claim 11, Burrows (6021409) teaches:

“writing a data structure....separator” as words and their representations have a separator (col. 6 lines 56-67)

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As per claims 21,28, Burrows (6021409) teaches:

“plurality of fields.....associated field” as reading the attributes (Col. 9 lines 21-29)

As per claims 21,29, Burrows (6021409) teaches:

“reading a last field....received word” as reading a zero to indicate the end of the encoding (col. 12 lines 13-15)

As per claims 19, Burrows (6021409) teaches:

“a compressed lexicon.....builder” as word list with domain such as attributes (Col. 9 lines 21-29)

“a plurality of domain encoders....data” as compressing the word entries based on delta values (Col. 11 line 40 – col. 12 line 26)

“a hashing component.....word list” as using index and pointers for the next available locations (col. 13 lines 45-50)

“a hash table generator.....lexicon memory” as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

“a lexicon memory....word” as using index and pointers for the next available locations (col. 13 lines 45-50);using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)) and computing a delta value as an offset (col. 11 line 65 – col. 12 line 6).

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As per claim 20, Burrows (6021409) teaches:

“lexicon memory generator....memory” as words and their representations have a separator (col. 6 lines 56-67).

As per claim 31, Burrows (6021409) teaches an index and pointer tied in with the word portions as using index and pointers for the next available locations (col. 13 lines 45-50) and using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

5. Claims 12-18,23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (6021409) in view of Sarukkai et al (5819220).

As per claim 12, Burrows (6021409) teaches:

“receiving the word....word information” as searching the index, accessing and decoding (col. 5 lines 15-35, and col. 6 lines 17-42)

Burrows (6021409) does not explicitly teach using the word manipulating apparatus for speech lexicon applications, however, Pringle et al (6470306) teaches a natural language translation system shuffling and translating word information between a user interface and a database (Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art of speech word processing to incorporate the lexicon database system and structure and taught by Burrows (6021409) into a speech translation system as taught by Pringle et al (6470306) because it would advantageously improve the storage



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and access of the word information (Burrows (6021409) col. 2 lines 61-66) into a natural language translation (Pringle et al (6470306), col. 2 lines 40-60).

As per claim 13, Burrows (6021409) teaches:

“prior to reading.....word” as verifying the candidate for the query (col. 6 lines 34-37)

As per claim 14, Burrows (6021409) teaches:

“reading a plurality.....information” as reading words as well as marks (col. 7 lines 13-23)

As per claims 15, Burrows (6021409) teaches:

“plurality of fields.....associated field” as reading the attributes (Col. 9 lines 21-29)

As per claims 16,25, Burrows (6021409) teaches:

“reading a last field....received word” as reading a zero to indicate the end of the encoding (col. 12 lines 13-15)

As per claim 17, Burrows (6021409) teaches:

“initializing.....information” as initializing the readers for each searched word (col. 20 lines 52-67)

As per claim 18, Burrows (6021409) teaches:

“calculating a hash value....lexicon” as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

As per claim 23, Burrows (6021409) teaches:

“a compressed lexicon.....builder” as word list with domain such as attributes (Col. 9 lines 21-29)

“a plurality of domain encoders....data” as compressing the word entries based on delta values (Col. 11 line 40 – col. 12 line 26)

“a hashing component.....word list” as using index and pointers for the next available locations (col. 13 lines 45-50)

“a hash table generator.....lexicon memory” as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

“a lexicon memory....word” as using index and pointers for the next available locations (col. 13 lines 45-50);using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)) and computing a delta value as an offset (col. 11 line 65 – col. 12 line 6).

Burrows (6021409) does not explicitly teach using the word manipulating apparatus for speech lexicon applications, however, Pringle et al (6470306) teaches a natural language translation system shuffling and translating word information between a user interface and a database (Fig. 1). Therefore, it would have been obvious to one of

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ordinary skill in the art of speech word processing to incorporate the lexicon database system and structure and taught by Burrows (6021409) into a speech translation system as taught by Pringle et al (6470306) because it would advantageously improve the storage and access of the word information (Burrows (6021409) col. 2 lines 61-66) into a natural language translation (Pringle et al (6470306), col. 2 lines 40-60).

As per claim 24, Burrows (6021409) teaches:

“lexicon memory generator....memory” as words and their representations have a separator (col. 6 lines 56-67).

As per claim 26, Burrows (6021409) teaches:

“writing the codebooks....lexicon memory” as stored data structure with an index format and pointer (col. 13 lines 24-32, lines 45-51) can be considered as a codebook.

### ***Response to Arguments***

6. Applicant's arguments received 5/19/06 have been fully considered but they are not persuasive. Examiner notes that the amended claims 1-11,19-22,27-31 still pertain to a lexicon memory, and there is no patentable weight afforded to “building a compressed speech lexicon for use in a speech application. Claims 12-18 and 23-26, now contain an antecedent basis requirement for the phrase “the compressed lexicon” back to the preamble containing “a compressed speech lexicon” and as such, the phrase “a compressed speech lexicon” in the

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preamble of independent claims 12 and 23 are afforded patentable weight; hence, examiner points to the new grounds of rejection for claims 12-18 and 23-26.

***Conclusion***


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see related art listed on the PTO-892 form.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno  
5/26/06

  
Michael N. Opsasnick  
Examiner  
Art Unit 2626